SONOMA COUNTY WATER AGENCY

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April 22, 2010

United States Army Corps of Engineers
441 G Street, NW
Washington, D.C. 203140-1000

Attention: Douglas J. Wade

Subject: **Docket Number COE-2010-0007**
Comments on: Process for Requesting a Variance from Vegetation Standards for Levees and Floodwalls

Dear Mr. Wade:

The Sonoma County Water Agency (Agency) appreciates the opportunity to comment on the proposed new process for requesting a variance for vegetation standards for levees and floodwalls. The proposed process was published in the Federal Register on February 9, 2010 (USACE, 2010). Comments were invited through April 25, 2010.

The Agency was created as a special district in 1949 by the California Legislature to provide flood protection and water supply services. Legislation enacted in 1995 added the treatment and disposal of wastewater to the Agency's responsibilities. Today, the Agency provides naturally filtered drinking water, flood protection services, distribution of recycled water, recreational opportunities, and wastewater treatment in portions of Sonoma County and Marin County.

Our flood management responsibilities focus on providing adequate flood protection along the streams and flood control channels that the Agency owns or maintains. Flood management responsibilities include maintenance of portions of the main stem of the Russian River and Dry Creek, where the Agency has maintenance partnerships developed with the U.S. Army Corps of Engineers (USACE) for levees and flood works developed downstream of Lake Sonoma (Dry Creek) and Lake Mendocino (Russian River). Operation and Maintenance (O&M) manuals for the flood protection and channel works along the main stem Russian River (USACE, 1965) and Dry Creek (USACE, 1991) exist, but are generally considered outdated given current environmental requirements and management approaches. The Agency also partners with private landowners in providing maintenance for levees participating in the disaster assistance program under Public Law (PL) 84-99.

This comment letter includes discussion of the following topics:

A. The Agency support of comments provided by BAFPAA
B. General condition of Sonoma County levees
C. Conflicting regulatory policies regarding levees
D. Uncertainty regarding methods to stabilize levees pending de-vegetation
E. Potential approach for Sonoma County levee management

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A. Support of Comments Provided by BAFPAA

The Bay Area Flood Protection Agencies Association (BAFPAA) represents several flood protection agencies in the San Francisco Bay Area and North Coast region of California. BAFPAA member agencies maintain hundreds of miles of levees and floodwalls in the region. On April 20, 2010, BAFPAA submitted a comment letter to the USACE describing concerns and recommendations regarding the USACE's proposed policy regarding vegetation standards for levees and floodwalls. As a member agency to BAFPAA, the Agency fully supports the comments and recommendations described in BAFPAA's April 20 comment letter. The key points raised in that letter that the Agency wishes to emphasize for consideration include:

- Many of the existing levees in the Bay Area and North Coast region were designed (many in cooperation with the USACE) to include vegetation. Many of the existing levees currently support mature vegetation that is considered unacceptable by current USACE standards.

- The USACE should undertake a complete Environmental Impact Report (EIS) under National Environmental Policy Act (NEPA) to disclose potential environmental impacts of the newly proposed requirements.

- The USACE is recommended to consult with the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS) to provide an approach to levee vegetation management that is consistent and acceptable to those federal agencies. Proposed vegetation guidance and variance requirements should satisfy USACE flood management objectives while also enabling federal and state Endangered Species Act (ESA) compliance.

- At this time an objective standard for evaluating whether the proposed variance will assure the safety, structural integrity, and functionality of a levee has not yet been identified. Such standards should be identified (or developed) through collaboration between the USACE and local flood management agencies.

- Regulatory conflicts also exist between the proposed USACE policies and local State of California agencies including the Regional Water Quality Control Boards (RWQCBs) and the California Department of Fish and Game (CDFG), who have issued many permit requirements for streambank maintenance projects in Sonoma County that require the detailed protection and enhancement of vegetation along streambanks.

- Exemptions to the proposed variance process should be allowable for levees that have no appreciable risk to the public, have an existing functional variance policy, or for levees where USACE approved maintenance manuals have been developed that describe local maintenance practices in support of flood management, habitat, water quality, and other functions.

- The timeline for the expiration of existing variances in September 2010 is unreasonable considering the extent of vegetation management work required to comply with the new standards.

B. Consideration of Sonoma County Levees

Department of the Army, USACE Technical Letter (ETL) No. 1110-2-571 (USACE, 2009) provides the most current guidelines for landscape planting and vegetation management at levees, floodwalls, embankments, and other appurtenant structures. This guidance supersedes previous interim guidance or other earlier guidelines. The recent policy guidance regarding the variance process for vegetation standards (USACE, 2010) is based on

the planting and vegetation management guidance provided in ETL 1110-2-571. The ETL 1110-2-571 includes 25 representative figures of typical levee cross sections and the location of vegetation fee zones in relation to the landside and riverside of levees.

However, the typical levee sections provided in Figures 1-25 of the vegetation guidance document (USACE, 2009) do not generally accurately represent the levee forms found in Sonoma County, particularly along Dry Creek or the main stem of the Russian River. In Sonoma County, these levees (which would fall under the proposed vegetation guidance) are typically comprised of historic earthen streambanks with additive earthen fill placed on top of the historic streambank. The great majority of the levees in Sonoma County are not engineered facilities designed to withstand flows of specific magnitude or frequency. Additionally, the levees of Sonoma County are generally not engineered to stand independently (or isolated) from the form of historic streambanks. As such, the various typical levees provided in the figures of ETL 1110-2-571 (USACE, 2009) do not necessarily accurately represent the existing levee forms or conditions in Sonoma County.

C. Conflicting Regulatory Guidance and the Russian River Biological Opinion

The proposed variance process as described in the Federal Register (USACE, 2010) and the vegetation guidance as provided in ETL 1110-2-571 (USACE, 2009) describe the acceptable vegetation-free zones, vegetation-management zones, and root-free zones for levees, floodwalls, etc. In Figures 1-25 of ETL 1110-2-571, the vegetation-free zone is shown for the levee crown, riverside slope, landside slope, and in general a 15 ft. minimum distance along the toe of both the riverside and landside. As discussed in Section B above, the Agency is uncertain which of the typical sections in Figures 1-25 would apply to the levees along Dry Creek and the main stem of the Russian River. However, it is likely that the same vegetation-free zones would apply.

The Agency understands and appreciates that removing or preventing woody vegetation along levees may further the inspection and access objectives described by the USACE in the 2009 and 2010 guidance documents. However, the wholesale eradication of woody vegetation within the vegetation-free zones would result in the loss of riparian habitat and vegetative cover, and thus present a clear and direct conflict with regulatory guidance and approvals provided by other federal and state agencies to the Agency, which encourage the retention of such habitat and vegetation.

Recently, the Agency revised its Stream Maintenance Program (SMP) through the development of an updated program manual (manual), preparation of an Environmental Impact Report to comply with CEQA, and application for several programmatic permits to comply with federal and state Clean Water Act (CWA) and Endangered Species Act (ESA) requirements. Participating permitting and reviewing agencies included the USACE, NMFS, USFWS, the local Regional Water Quality Control Boards, and the CDFG. One of the fundamental concepts in the revised SMP, emphasized by all participating federal, state, and local regulatory agencies, was the importance of streambank vegetation and the need to maintain a healthy riparian corridor and cover along stream channels.

While the SMP Manual and its permits do not currently directly apply to the levees along Dry Creek and the main stem Russian River, the goal of preserving and enhancing vegetation and the riparian canopy of the SMP have been similarly requested and required by the RWQCB and CDFG for project specific permitting along Dry Creek and the main stem of the Russian River. The requirement of maintaining and enhancing woody vegetation along stream banks and levees by the RWQCB and the CDFG present a clear and direct conflict with the vegetation management policies provided in the recent USACE policy documents.

In addition, recent USACE vegetation policies also directly conflict with obligations imposed upon the Agency by the federal Endangered Species Act. In September 2008, NMFS issued a Biological Opinion (BO) examining the impacts on three listed salmonid species (Chinook salmon, coho salmon, and steelhead) of water supply, flood control operations, and channel maintenance activities conducted by the USACE, the Agency, and the Mendocino County Russian River Flood Control and Water Conservation Improvement District (MCRRFCWCID) in the Russian River watershed (NMFS, 2008). This Russian River water supply, flood control, and channel maintenance BO (RR-BO) was the culmination of 10 years of coordinated work and analysis between several federal, state, and local agencies, as well as other community partners.

In its *Environmental Baseline* section, the RR-BO found that past channel maintenance activities, including the removal of streambank vegetation along Dry Creek and the Russian River (presumably along the "levees"), contributed to the decrease in spawning and rearing habitat for salmonids by reducing shade canopy and cover at pools and refuge areas. The reduction of shade cover and canopy also results in increased water temperatures, further affecting habitat suitability. The *Incidental Take Statement* of the 2008 RR-BO described how the channel maintenance activities conducted by USACE or the Agency, including vegetation maintenance, along the Russian River and Dry Creek may result in "take" due to habitat degradation by the loss of habitat complexity and loss of refuge and thermal cover.

The RR-BO contains *Reasonable and Prudent Measures (RPM) and Terms and Conditions* that specify certain water supply, flood control, and channel maintenance requirements that the Agency must follow in order to receive "incidental take" authority with respect to their activities along the main stem Russian River and Dry Creek (NMFS, 2008). These required measures, terms, and conditions require that the Agency undertake measures to ensure that harm and mortality to listed salmonids resulting from channel maintenance activities (including bank stabilization and bank vegetation management) are low. The requirements of the RR-BO are in clear and direct conflict with the USACE's new requirement that levees must be maintained free of vegetation.

D. Uncertainty Regarding Methods to De-Vegetate Levees and Levee Stability Pending USACE Vegetation Policies

In reviewing the vegetation and variance guidance recently provided (USACE 2010, 2009), the Agency is uncertain on what vegetation management is required within the vegetation-free zones for existing vegetation that poses no hydraulic or other flood threat. The removal of existing trees may lead to root rot and hydraulic piping along root channels and pores that may destabilize the levees, and therefore result in a poorer structure than would exist by maintaining the existing vegetation. As described in the Agency's Manual, the Agency's vegetation management approach for its flood control channels is to limb, prune, and thin mature vegetation so as to reduce hydraulic roughness, while also fostering a healthy riparian canopy. The benefits of limbing and pruning in minimizing hydraulic roughness is that it also provides clear sighting and visibility around the base of the tree (typically the lower 8-10 feet or so of the tree is clear of limbs and branches). This limbing and thinning approach that the Agency favors provides good bank visibility and is consistent with USACE objectives to provide visibility and access along levee slopes and crowns. According to our understanding of current USACE guidance, the wholesale removal of trees on levee slopes that is required would provide a less beneficial outcome compared to managing the existing vegetation for both improved visibility and stability. The Agency recommends pruning and limbing activities, to achieve a solution that is both structurally sound for the levee and also provides visibility. Where existing trees are dying, sick, or otherwise pose a flood risk, erosion risk, or fall risk, they would be identified for selective removal. The Agency recommends this approach to manage existing vegetation to benefit levee stability, visibility, and habitat.

E. Potential Approach for Sonoma County

As mentioned above, the O&M manuals for the flood protection and channel works along the main stem Russian River (USACE, 1965) and Dry Creek (USACE, 1983) are outdated and no longer consistent with CWA and ESA requirements and more recent and updated maintenance approaches. The Agency wants to work with the local USACE San Francisco District to revise these O&M manuals to describe current approaches to bank stabilization and vegetation management that provide flood control benefits, protect the flood control works, and also provide environmental compliance for CWA and ESA requirements. The revised O&M manuals would describe the Agency's current approach to bank stabilization, which minimizes the use and application of riprap and hardscape. The revised O&M manuals would also include an updated vegetation management approach following that described in Section D above, using careful limbing, pruning, and thinning to reduce the hydraulic roughness of existing vegetation, providing riparian canopy benefits, and also providing good bank visibility and access. Select trees that are dying or otherwise cause a flood or erosion threat would be removed. The Agency believes that such a multi-objective approach can successfully provide both flood management and riparian habitat benefits, while also providing a levee environment which satisfies the USACE's levee safety, inspection, and access needs. Such revised O&M manuals would also serve as the basis for complete environmental review through the NEPA and CEQA compliance processes.

F. Closing

We thank the USACE for inviting comments on the recent vegetation management and variance process guidance provided in recent publications (USACE 2010, 2009). Managing the vegetation on the levees of Dry Creek and the main stem Russian River is very important to the Agency for both its flood management and natural resource functions. We recognize that regulatory objectives and requirements do change with time, but the proposed requirements are contrary to all other prevailing environmental regulations for streamside vegetation developed over the last 20 years.

This coming May, we anticipate meeting with USACE representatives from the San Francisco District and other participating Bay Area flood control districts at a Levee Workshop. We also look forward to meeting with USACE representatives to discuss the specific issues in Sonoma County, and discuss and confirm with the USACE, the Agency's proposed approach (as summarized in Sections D and E above) to develop revised O&M manuals that include a levee and vegetation management solution for Sonoma County that is cost effective, provides flood control benefits, is compliant with CWA/ESA requirements, and is acceptable to the USACE.

We appreciate your consideration and look forward to a good continued working relationship with the USACE.

Sincerely,

Grant Davis
General Manager

c Mike Thompson, Sonoma County Water Agency
Jon Niehaus, Sonoma County Water Agency
David Cuneo, Sonoma County Water Agency

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